metastasis. One problem in this connection is that sometimes it is difficult to tell whether a lesion is benign or malignant, even with histologic examination. However, destruction of the bony anterior maxillary sinus wall, pain and progressive growth implies a malignant character. Fibrosarcoma is exceedingly radioresistant, but an occasional tumor may respond to radiation therapy.

SUMMARY

An antral fibrosarcoma with dental involvement in a 14-year-old boy was radically excised and there was no evidence of recurrence a year after operation.

The prognosis of fibrosarcoma depends on the location and the degree of cellular differentiation.

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A Case of Probable Scurvy in the Citrus Belt

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THE COMBINATION of hemorrhagic phenomena and hypovitaminosis C is well known, but certainly not a problem one expects to find in a region (San Gabriel Valley, California) long famous for its citrus industry and where almost every home has an orange or lemon tree in the backyard. Yet the following case stresses again that vitamin C deficiency should be considered in any patient with spontaneous bleeding.

REPORT OF A CASE

A 45-year-old white woman entered Glendora Hospital because of profuse and unrelenting nosebleed for two days. The episode was acute in onset. There were no other hemorrhagic manifestations. Despite multiple posterior nasal packs the mucosa continued to ooze.

Blood pressure at the time of admittance was 122/76 mm of mercury. Platelets numbered 110,000 per cu mm at one determination and 230,000 at another. Bleeding time (Ivy) was 1 minute 40 seconds, coagulation time (Lee-White) 4 minutes 30 seconds, and prothrombin time by the Quick one-stage method was normal. Clot retraction complete at 12 hours. Serum proteins, calcium and phosphorus were within normal limits.

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Review of history elicited that the patient had been previously on a restricted diet for peptic ulcer. Further questioning by her attending physician brought out that she had neglected supplemental vitamins prescribed for the dietary period. At this point a serum ascorbic acid determination performed on a fresh specimen gave a value of 0.24 mg per 100 cc (normal: 0.6 to 2.0 mg). Large doses of ascorbic acid were given parenterally and dramatic relief of symptoms promptly followed. When the patient was observed six months later there was no evidence of recurrence.

COMMENT

The prostrate scorbutic patient with loose teeth and bleeding gums belongs largely to the past or to those situations in which one attends indigents of the "skid row" type. Otherwise scurvy is a distinct rarity in adults, at least in advanced societies. Careful experimental study of human volunteers has established that the earliest discernible manifestations of scurvy, hyperkeratosis about hair follicles notably on calves and buttocks, appears 134 days after elimination of vitamin C from the diet.[2] About three weeks later one may observe perifollicular petechiae and poor wound healing. However, there is sometimes little correlation between these changes and the symptoms usually noted in clinical practice. Thus at the London Hospital, Cutforth[3] found only two out of 11 adult scorbutic patients with notable perifollicular changes. He was more impressed with frank bleeding as a presenting sign. Often this takes the form of hemorrhage into muscles, painless hematuria, seepage of blood into serous cavities or epistaxis.[9]

While most scorbutic patients have the disease in combination with other vitamin deficiencies or with "stress" states such as infection, Davidson[4] first reported the interesting relationship between scurvy and peptic ulcer especially when the patients had been following the Sippy regimen. Subsequent studies indicated significant asboric acid depletion in ulcer patients even before dietary therapy was begun.[1,5,7,8,11] Portnoy and Wilkenson, for example, in a series of 58 patients with ulcer noted serum ascorbic levels from 0.14 to 0.59 mg per 100 cc but no clinical indication of scurvy. It is thus well established that patients with peptic ulcer may be at the threshold of scurvy even before special restrictive diet is applied. Reasons for this remain obscure although gastric irritation and intestinal hypermotility have been shown to lower plasma ascorbic acid levels appreciably.[6]

According to Ralli and Sherry,[9] a diagnosis of scurvy is justified if the following criteria are met:

• History of ascorbic acid deficient diet or presence of some condition known to increase the body's demand for this vitamin.

• Physical findings characteristic of the scorbutic state.

• A low level of ascorbic acid in blood, urine or tissues.

A low plasma ascorbic acid level is not proof of scurvy, present or imminent, but most authorities consider a value of under 0.5 mg per 100 cc as at the scurvy level.[9] Certainly this may be a crucial laboratory determination in the investigation of a given patient with a perplexing bleeding problem.[10]

The case described appears to satisfy the criteria for a diagnosis of scurvy. It illustrates the need for proper dietary supervision in patients undergoing medical therapy for peptic ulcer, even if they live in an area where oranges abound.

SUMMARY

A patient with intractable nosebleed was found upon serum ascorbic acid determination to have a pronounced deficiency of this vitamin even though she lived in an area where citrus fruits abound. She had had dietary treatment for peptic ulcer and questioning elicited that she had not taken supplemental vitamins as prescribed.

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Incarcerated Hiatal Hernia with Gangrene of the Entire Stomach

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A TWENTY YEAR OLD white man was admitted to the Merced County General Hospital on January 26, 1960, for observation on the medical service. He gave a history of having fairly sharp pain in the anterior chest after wrestling with his brother 24 hours before admission. The pain was constant and spread to the epigastric area during the night. The day of admission he had some retching and vomiting, and he was nauseated on admission. The thoracic pain was aggravated by deep breathing.

He gave a history of having had severe injuries in 1958 in an automobile collision—multiple fractures of left ribs, left pneumothorax and cranial injuries. He had been unconscious for 21 days. Burr holes had been drilled in the skull because of the head injury, and a tracheotomy was also performed. He recovered promptly from the injuries but thereafter had occasional episodes of pain in the left side of the chest associated with some shortness of breath.

Upon admission the patient appeared to be in moderate respiratory distress. The pulse rate was 92, respirations 24 per minute, the temperature 98.6° F. and blood pressure 170/90 mm of mercury.

Upon examination, bilateral trephine depressions were observed in each anterior parietal region of the scalp. Dullness to percussion was noted over the left lower lung field, and breath sounds over this same area were diminished to absent. No rales were heard.

The abdomen was soft and flat. There was mild to moderate tenderness in the epigastric region. No masses were palpable. The spleen and liver were not enlarged.

Leukocytes numbered 15,000 per cu mm of blood with a total of 97 per cent polymorphonuclear cells, 81 per cent segmented and 16 per cent nonsegmented. Hemoglobin was 12.6 grams per 100 ml. The hematocrit was 39 per cent.

Urinalysis showed a 3 plus reaction for sugar, a faint trace of albumin and an occasional white blood cell. Blood sugar was 167 mg per 100 ml.

X-ray films of the chest showed the right lung to be clear. The left diaphragm was considerably elevated, with what seemed to be a high fluid level in the stomach immediately below it. The cardiac outline was normal. A roentgenogram later in the day showed the heart and mediastinal structures shifted to the right. There appeared to be some pleural fluid on the left.

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